

SEQUENCE LISTING

<110> Soppet et al.

<120> G-Protein Parathyroid Hormone Receptor HLTDG74

<130> PF201D1

<140> 09/236,468

<141> 1999-01-25

<150> 08/468,011

<151> 1995-06-06

<160> 28

<170> PatentIn Ver. 2.1

<210> 1

<211> 2003

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (90)..(1715)

<400> 1

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ccctgcttct tctacagcc gttccgggc atg gcc tgg ctg ggg gcg tcg ctc 113
Met Ala Trp Leu Gly Ala Ser Leu
1 5

cac gtc tgg ggt tgg cta atg ctc ggc agc tgc ctc ctg gcc aga gcc 161
His Val Trp Gly Trp Leu Met Leu Gly Ser Cys Leu Leu Ala Arg Ala
10 15 20

cag ctg gat tct gat ggc acc atc act ata gag gag cag att gtc ctt 209
Gln Leu Asp Ser Asp Gly Thr Ile Thr Ile Glu Glu Gln Ile Val Leu
25 30 35 40

gtg ctg aaa gcg aaa gta caa tgt gaa ctc aac atc aca gct caa ctc 257
Val Leu Lys Ala Lys Val Gln Cys Glu Leu Asn Ile Thr Ala Gln Leu
45 50 55

cag gag gga gaa ggt aat tgt ttc cct gaa tgg gat gga ctc att tgt 305
Gln Glu Gly Glu Gly Asn Cys Phe Pro Glu Trp Asp Gly Leu Ile Cys
60 65 70

tgg ccc aga gga aca gtg ggg aaa ata tcg gct gtt cca tgc cct cct 353
Trp Pro Arg Gly Thr Val Gly Lys Ile Ser Ala Val Pro Cys Pro Pro
75 80 85

tat att tat gac ttc aac cat aaa gga gtt gct ttc cga cac tgt aac 401
Tyr Ile Tyr Asp Phe Asn His Lys Gly Val Ala Phe Arg His Cys Asn
90 95 100

ccc aat gga aca tgg gat ttt atg cac agc tta aat aaa aca tgg gcc 449
Pro Asn Gly Thr Trp Asp Phe Met His Ser Leu Asn Lys Thr Trp Ala
105 110 115 120

aat Asn	tat Tyr	tca Ser	gac Asp	tgc Cys 125	ctt Leu	cgc Arg	ttt Phe	ctg Leu	cag Gln 130	cca Pro	gat Asp	atc Ile	agc Ser	ata Ile 135	gga Gly	497
aag Lys	caa Gln	gaa Glu	ttc Phe 140	tgt Cys	gaa Glu	cgc Arg	ctc Leu	tat Tyr 145	gta Val	atg Met	tat Tyr	acc Thr	gtt Val 150	ggc Gly	tac Tyr	545
tcc Ser	atc Ile	tct Ser 155	ttt Phe	ggc Gly	tcc Ser	ttg Leu	gct Ala 160	gtg Val	gct Ala	att Ile	ctc Leu	atc Ile 165	att Ile	ggc Gly	tac Tyr	593
ttc Phe	aga Arg 170	cga Arg	ttg Leu	cat His	tgc Cys	act Thr 175	agg Arg	aac Asn	tat Tyr	atc Ile	cac His 180	atg Met	cac His	tta Leu	ttt Phe	641
gtg Val 185	tct Ser	ttc Phe	atg Met	ctg Leu	aga Arg 190	gct Ala	aca Thr	agc Ser	atc Ile	ttt Phe 195	gtc Val	aaa Lys	gac Asp	aga Arg	gta Val 200	689
gtc Val	cat His	gct Ala	cac His	ata Ile 205	gga Gly	gta Val	aag Lys	gag Glu	ctg Leu 210	gag Glu	tcc Ser	cta Leu	ata Ile 215	atg Met	cag Gln	737
gat Asp	gac Asp	cca Pro	caa Gln 220	aat Asn	tcc Ser	att Ile	gag Glu	gca Ala 225	act Thr	tct Ser	gtg Val	gac Asp	aaa Lys 230	tca Ser	caa Gln	785
tat Tyr	atc Ile	ggg Gly 235	tgc Cys	aag Lys	att Ile	gct Ala	gtt Val 240	gtg Val	atg Met	ttt Phe	att Ile	tac Tyr 245	ttc Phe	ctg Leu	gct Ala	833
aca Thr	aat Asn 250	tat Tyr	tat Tyr	tgg Trp	atc Ile	ctg Leu 255	gtg Val	gaa Glu	ggc Gly	ctc Leu	tac Tyr 260	ctg Leu	cat His	aat Asn	ctc Leu	881
atc Ile 265	ttt Phe	gtg Val	gct Ala	ttc Phe	ttt Phe 270	tcg Ser	gac Asp	acc Thr	aaa Lys	tac Tyr 275	ctg Leu	tgg Trp	ggc Gly	ttc Phe	atc Ile 280	929
ttg Leu	ata Ile	ggc Gly	tgg Trp	ggg Gly 285	ttt Phe	cca Pro	gca Ala	gca Ala	ttt Phe 290	gtt Val	gca Ala	gca Ala	tgg Trp	gct Ala	gtg Val 295	977
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gac Asp	atc Ile	aag Lys 315	tgg Trp	att Ile	tat Tyr	caa Gln	gca Ala 320	ccg Pro	atc Ile	tta Leu	gca Ala	gct Ala 325	att Ile	ggg Gly	ctg Leu	1073
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tgg Trp 345	gag Glu	acc Thr	aat Asn	gca Ala	gtt Val 350	ggg Gly	cat His	gac Asp	aca Thr	agg Arg 355	aag Lys	caa Gln	tac Tyr	agg Arg	aaa Lys 360	1169

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<210> 2
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 2

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Gly	Ser	Cys	Leu	Leu	Ala	Arg	Ala	Gln	Leu	Asp	Ser	Asp	Gly	Thr	Ile
			20					25					30		
Thr	Ile	Glu	Glu	Gln	Ile	Val	Leu	Val	Leu	Lys	Ala	Lys	Val	Gln	Cys
		35					40					45			
Glu	Leu	Asn	Ile	Thr	Ala	Gln	Leu	Gln	Glu	Gly	Glu	Gly	Asn	Cys	Phe
	50					55					60				
Pro	Glu	Trp	Asp	Gly	Leu	Ile	Cys	Trp	Pro	Arg	Gly	Thr	Val	Gly	Lys
	65				70					75					80
Ile	Ser	Ala	Val	Pro	Cys	Pro	Pro	Tyr	Ile	Tyr	Asp	Phe	Asn	His	Lys
				85					90					95	
Gly	Val	Ala	Phe	Arg	His	Cys	Asn	Pro	Asn	Gly	Thr	Trp	Asp	Phe	Met
		100						105					110		
His	Ser	Leu	Asn	Lys	Thr	Trp	Ala	Asn	Tyr	Ser	Asp	Cys	Leu	Arg	Phe
		115					120					125			
Leu	Gln	Pro	Asp	Ile	Ser	Ile	Gly	Lys	Gln	Glu	Phe	Cys	Glu	Arg	Leu
	130					135					140				
Tyr	Val	Met	Tyr	Thr	Val	Gly	Tyr	Ser	Ile	Ser	Phe	Gly	Ser	Leu	Ala
	145				150					155					160
Val	Ala	Ile	Leu	Ile	Ile	Gly	Tyr	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg
			165					170						175	
Asn	Tyr	Ile	His	Met	His	Leu	Phe	Val	Ser	Phe	Met	Leu	Arg	Ala	Thr
		180						185					190		
Ser	Ile	Phe	Val	Lys	Asp	Arg	Val	Val	His	Ala	His	Ile	Gly	Val	Lys
		195					200					205			
Glu	Leu	Glu	Ser	Leu	Ile	Met	Gln	Asp	Asp	Pro	Gln	Asn	Ser	Ile	Glu
	210					215					220				
Ala	Thr	Ser	Val	Asp	Lys	Ser	Gln	Tyr	Ile	Gly	Cys	Lys	Ile	Ala	Val
	225				230					235					240
Val	Met	Phe	Ile	Tyr	Phe	Leu	Ala	Thr	Asn	Tyr	Tyr	Trp	Ile	Leu	Val
			245						250					255	
Glu	Gly	Leu	Tyr	Leu	His	Asn	Leu	Ile	Phe	Val	Ala	Phe	Phe	Ser	Asp
		260					265						270		
Thr	Lys	Tyr	Leu	Trp	Gly	Phe	Ile	Leu	Ile	Gly	Trp	Gly	Phe	Pro	Ala
		275					280					285			
Ala	Phe	Val	Ala	Ala	Trp	Ala	Val	Ala	Arg	Ala	Thr	Leu	Ala	Asp	Ala

290	295	300
Arg Cys Trp Glu Leu Ser Ala Gly Asp Ile Lys Trp Ile Tyr Gln Ala 305 310 315 320		
Pro Ile Leu Ala Ala Ile Gly Leu Asn Phe Ile Leu Phe Leu Asn Thr 325 330 335		
Val Arg Val Leu Ala Thr Lys Ile Trp Glu Thr Asn Ala Val Gly His 340 345 350		
Asp Thr Arg Lys Gln Tyr Arg Lys Leu Ala Lys Ser Thr Leu Val Leu 355 360 365		
Val Leu Val Phe Gly Val His Tyr Ile Val Phe Val Cys Leu Pro His 370 375 380		
Ser Phe Thr Gly Leu Gly Trp Glu Ile Arg Met His Cys Glu Leu Phe 385 390 395 400		
Phe Asn Ser Phe Gln Gly Phe Phe Val Ser Ile Ile Tyr Cys Tyr Cys 405 410 415		
Asn Gly Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn 420 425 430		
Leu Ser Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser Arg Arg Cys 435 440 445		
Gly Ser Val Leu Thr Thr Val Thr His Ser Thr Ser Ser Gln Ser Gln 450 455 460		
Val Ala Ala Ala His Ala Trp Cys Leu Ser Leu Ala Lys Leu Pro Arg 465 470 475 480		
Ser Pro Ala Asp Ser Leu Thr Ala Thr Ser Leu Tyr Leu Ala Met Ser 485 490 495		
Gly Val Thr Gln Ser Arg Thr Ala Ser His Thr Leu Ser Thr Arg Ser 500 505 510		
Asn Lys Glu Asp Ser Gly Arg Gln Arg Asp Asp Ile Leu Met Glu Lys 515 520 525		
Pro Ser Arg Pro Met Glu Ser Asn Pro Asp Thr Glu Gly 530 535 540		

<210> 3

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<221> Primer_Bind

<223> This 5' primer sequence contains a SmaI restriction enzyme site followed by nucleotides corresponding to PTH receptor coding sequence.

<400> 3
cagccgtccc gggcttggcc tgg

23

<210> 4
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> This 3' primer sequence contains a SalI restriction enzyme site and a sequence complementary to the human PTH receptor.

<400> 4
cctcagtgtc gacttgatcat ccttcag

27

<210> 5
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> This 5' primer contains a HindIII restriction enzyme site and a nucleotide sequence corresponding to the 5' UTR of the cDNA encoding human PTH receptor.

<400> 5
gttggcatat tggaagcttt ttgcggg

27

<210> 6
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> This 3' primer sequence contains an XbaI restriction enzyme site, a translation stop codon, and nucleotides complementary to the human PTH receptor coding sequence.

<400> 6
cagtttctag atgtcatcct tcagtgtc

28

<210> 7
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> This 5' primer contains a SmaI restriction enzyme site, a nucleotide sequence to provide efficient initiation of translation in eukaryotic cells, and a nucleotide sequence corresponding to the human PTH receptor cDNA, including an initiation codon.

<400> 7
tcctaccg ggcgccatca tggcctggct ggggggcct

39

<210> 8
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> This 3' primer contains an XbaI restriction enzyme site and a nucleotide sequence complementary to the 3' untranslated region of the PTH receptor cDNA.

<400> 8
cagtttctag atgtcatcct tcagtgtc

28

<210> 9
<211> 60
<212> PRT
<213> Homo sapiens

<400> 9
Ile Met Gln Asp Asp Pro Gln Asn Ser Ile Glu Ala Thr Ser Val Asp
1 5 10 15
Lys Ser Gln Tyr Ile Gly Cys Lys Ile Ala Val Val Met Phe Ile Tyr
20 25 30
Phe Leu Ala Thr Asn Tyr Tyr Trp Ile Leu Val Glu Gly Leu Tyr Leu
35 40 45
His Asn Leu Ile Phe Val Ala Phe Phe Ser Asp Thr
50 55 60

<210> 10
<211> 60
<212> PRT
<213> Didelphis virginiana

<400> 10
Ile Thr Glu Glu Glu Leu Arg Ala Phe Thr Glu Pro Pro Pro Ala Asp
1 5 10 15
Lys Ala Gly Phe Val Gly Cys Arg Val Ala Val Thr Val Phe Leu Tyr
20 25 30
Phe Leu Thr Thr Asn Tyr Tyr Trp Ile Leu Val Glu Gly Leu Tyr Leu
35 40 45
His Ser Leu Ile Phe Met Ala Phe Phe Ser Glu Lys
50 55 60

<210> 11
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 11
 Lys Tyr Leu Trp Gly Phe Ile Leu Ile Gly Trp Gly Phe Pro Ala Ala
 1 5 10 15
 Phe Val Ala Ala Trp Ala Val Ala Arg Ala Thr Leu Ala Asp Ala Arg
 20 25 30
 Cys Trp Glu Leu Ser Ala Gly Asp Ile Lys Trp Ile Tyr Gln Ala Pro
 35 40 45
 Ile Leu Ala Ala Ile Gly Leu Asn Phe Ile Leu Phe
 50 55 60

<210> 12
 <211> 60
 <212> PRT
 <213> Didelphis virginiana

<400> 12
 Lys Tyr Leu Trp Gly Phe Thr Leu Phe Gly Trp Gly Leu Pro Ala Val
 1 5 10 15
 Phe Val Ala Val Trp Val Thr Val Arg Ala Thr Leu Ala Asn Thr Glu
 20 25 30
 Cys Trp Asp Leu Ser Ser Gly Asn Lys Lys Trp Ile Ile Gln Val Pro
 35 40 45
 Ile Leu Ala Ala Ile Val Val Asn Phe Ile Leu Phe
 50 55 60

<210> 13
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 13
 Leu Asn Thr Val Arg Val Leu Ala Thr Lys Ile Trp Glu Thr Asn Ala
 1 5 10 15
 Val Gly His Asp Thr Arg Lys Gln Tyr Arg Lys Leu Ala Lys Ser Thr
 20 25 30
 Leu Val Leu Val Leu Val Phe Gly Val His Tyr Ile Val Phe Val Cys
 35 40 45
 Leu Pro His Ser
 50

<210> 14
 <211> 52
 <212> PRT
 <213> Didelphis virginiana

<400> 14
 Ile Asn Ile Ile Arg Val Leu Ala Thr Lys Leu Arg Glu Thr Asn Ala
 1 5 10 15
 Gly Arg Cys Asp Thr Arg Gln Gln Tyr Arg Lys Leu Leu Lys Ser Thr
 20 25 30
 Leu Val Leu Met Pro Leu Phe Gly Val His Tyr Ile Val Phe Met Ala
 35 40 45
 Thr Pro Tyr Thr
 50

<210> 15
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 15
 Glu Gly Asn Cys Phe Pro Glu Trp Asp Gly Leu Ile Cys Trp Pro Arg
 1 5 10 15
 Gly Thr Val Gly Lys Ile Ser Ala Val Pro Cys Pro Pro Tyr Ile Tyr
 20 25 30
 Asp Phe Asn His Lys Gly Val Ala Phe Arg His Cys Asn Pro Asn Gly
 35 40 45
 Thr Trp Asp Phe Met His Ser Leu Asn Lys Thr Trp
 50 55 60

<210> 16
 <211> 60
 <212> PRT
 <213> Didelphis virginiana

<400> 16
 Asp Gly Phe Cys Leu Pro Glu Trp Asp Asn Ile Val Cys Trp Pro Ala
 1 5 10 15
 Gly Val Pro Gly Lys Val Val Ala Val Pro Cys Pro Asp Tyr Ile Tyr
 20 25 30
 Asp Phe Asn His Lys Gly Arg Ala Tyr Arg Arg Cys Asp Ser Asn Gly
 35 40 45
 Ser Trp Glu Leu Val Pro Gly Asn Asn Arg Thr Trp
 50 55 60

<210> 17
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 17
 Ala Asn Tyr Ser Asp Cys Leu Arg Phe Leu
 1 5 10

<210> 18
 <211> 10
 <212> PRT
 <213> Didelphis virginiana

<400> 18
 Ala Asn Tyr Ser Glu Cys Val Lys Phe Leu
 1 5 10

<210> 19
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 19
 Lys Gln Glu Phe Cys Glu Arg Leu Tyr Val Met Tyr Thr Val Gly Tyr
 1 5 10 15
 Ser Ile Ser Phe Gly Ser Leu Ala Val Ala Ile Leu Ile Ile Gly Tyr
 20 25 30
 Phe Arg Arg Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe
 35 40 45
 Val Ser Phe Met Leu Arg Ala Thr Ser Ile Phe Val
 50 55 60

<210> 20
 <211> 60
 <212> PRT
 <213> Didelphis virginiana

<400> 20
 Glu Arg Glu Val Phe Asp Arg Leu Gly Met Ile Tyr Thr Val Gly Tyr
 1 5 10 15
 Ser Ile Ser Leu Gly Ser Leu Thr Val Ala Val Leu Ile Leu Gly Tyr
 20 25 30
 Phe Arg Arg Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe
 35 40 45
 Val Ser Phe Met Leu Arg Ala Val Ser Ile Phe Ile
 50 55 60

<210> 21
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 21
 Lys Asp Arg Val Val His Ala His Ile Gly Val Lys Glu Leu Glu Ser
 1 5 10 15
 Leu Ile Met Gln Asp
 20

<210> 22
 <211> 21
 <212> PRT
 <213> Didelphis virginiana

<400> 22
 Lys Asp Ala Val Leu Tyr Ser Gly Val Ser Thr Asp Glu Ile Glu Arg
 1 5 10 15
 Ile Thr Glu Glu Glu
 20

<210> 23
 <211> 59
 <212> PRT
 <213> Homo sapiens

<400> 23
 Thr Gly Leu Gly Trp Glu Ile Arg Met His Cys Glu Leu Phe Phe Asn
 1 5 10 15
 Ser Phe Gln Gly Phe Phe Val Ser Ile Ile Tyr Cys Tyr Cys Asn Gly
 20 25 30
 Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn Leu Ser
 35 40 45
 Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser
 50 55

<210> 24
 <211> 59
 <212> PRT
 <213> Didelphis virginiana

<400> 24
 Ser Gly Ile Leu Trp Gln Val Gln Met His Tyr Glu Met Leu Phe Asn
 1 5 10 15
 Ser Phe Gln Gly Phe Phe Val Ala Ile Ile Tyr Cys Phe Cys Asn Gly
 20 25 30
 Glu Val Gln Ala Glu Ile Lys Lys Ser Trp Ser Arg Trp Thr Leu Ala
 35 40 45

Leu Asp Phe Lys Arg Lys Ala Arg Ser Gly Ser
50 55

<210> 25
<211> 37
<212> PRT
<213> Homo sapiens

<400> 25
Ala Gln Leu Asp Ser Asp Gly Thr Ile Thr Ile Glu Glu Gln Ile Val
1 5 10 15

Leu Val Leu Lys Ala Lys Val Gln Cys Glu Leu Asn Ile Thr Ala Gln
20 25 30

Leu Gln Glu Gly Glu
35

<210> 26
<211> 37
<212> PRT
<213> Didelphis virginiana

<400> 26
Ala Leu Val Asp Ala Asp Asp Val Ile Thr Lys Glu Glu Gln Ile Ile
1 5 10 15

Leu Leu Arg Asn Ala Gln Ala Gln Cys Glu Gln Arg Leu Lys Glu Val
20 25 30

Leu Arg Val Pro Glu
35

<210> 27
<211> 23
<212> PRT
<213> Homo sapiens

<400> 27
Ile Ser Gly Lys Ala Ala Lys Ile Ala Ser Arg Gln Pro Asp Ser His
1 5 10 15

Ile Thr Leu Pro Gly Tyr Val
20

<210> 28
<211> 23
<212> PRT
<213> Didelphis virginiana

<400> 28
Leu Ser Pro Arg Leu Ala Pro Gly Ala Gly Ala Ser Ala Asn Gly His
1 5 10 15

His Gln Leu Pro Gly Tyr Val
20